

CRF Errors Corrected by the STIC Systems Branch

CRF Processing Date:

Edited by:

Verified by:

1/30/2003

#21

Serial Number: 09/502,498A

(STIC staff)

ENTERED Changed a file from non-ASCII to ASCII Changed the margins in cases where the sequence text was "wrapped" down to the next line. Edited a format error in the Current Application Data section, specifically: Edited the Current Application Data section with the actual current number. The number inputted by the applicant was the prior application data; or other _____ Added the mandatory heading and subheadings for "Current Application Data". Edited the "Number of Sequences" field. The applicant spelled out a number instead of using an integer. Changed the spelling of a mandatory field (the headings or subheadings), specifically: Corrected the SEQ ID NO when obviously incorrect. The sequence numbers that were edited were: Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited: Corrected subheading placement. All responses must be on the same line as each subheading. If the applicant placed a response below the subheading, this was moved to its appropriate place. Inserted colons after headings/subheadings. Headings edited included: Deleted extra, invalid, headings used by an applicant, specifically: Deleted: non-ASCII "garbage" at the beginning/end of files; secretary initials/filename at end of file; page numbers throughout text; other invalid text, such as _____ Inserted mandatory headings, specifically: Corrected an obvious error in the response, specifically: Edited identifiers where upper case is used but lower case is required, or vice versa. Corrected an error in the Number of Sequences field, specifically: A "Hard Page Break" code was inserted by the applicant. All occurrences had to be deleted. Deleted ending stop codon in amino acid sequences and adjusted the "(A)Length:" field accordingly (error due to a PatentIn bug). Sequences corrected: _____ Other:



1600

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/502,498A

DATE: 01/30/2003

TIME: 12:42:55

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\01292003\I502498A.raw

3 <110> APPLICANT: Kilian, Andrzej
 4 Bowtell, David
 6 <120> TITLE OF INVENTION: VERTEBRATE TELOMERASE GENES AND PROTEINS AND USES
 7 THEREOF
 9 <130> FILE REFERENCE: 082447-0102
 11 <140> CURRENT APPLICATION NUMBER: 09/502,498A
 12 <141> CURRENT FILING DATE: 2000-02-11
 14 <160> NUMBER OF SEQ ID NOS: 155
 16 <170> SOFTWARE: PatentIn Ver. 2.0
 18 <210> SEQ ID NO: 1
 19 <211> LENGTH: 3964
 20 <212> TYPE: DNA
 21 <213> ORGANISM: Homo sapiens
 23 <400> SEQUENCE: 1
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 26 cgcggggacc cggcgcttt cgcgcgcgtg gtggggccagt gcctgggtgt cgtgcctgg 180
 27 gacgcacggc cgccccccgc cgccccctcc ttccgcccagg tgtcctgcct gaaggagctg 240
 28 gtggcccgag tgctgcagag gctgtgcgag cgcggcgcga agaacgtgtc ggccttcggc 300
 29 ttgcgcgtgc tggacggggc cgcggggggc ccccccgggg ccttcaccac cagcgtgcgc 360
 30 agtacctgc ccaacacggcgt gaccgacgca ctgcggggga gcggggcggt ggggctgtg 420
 31 ttgcgcgcgt tggggcagca cgtgcgtgtt cacctgcgtt cacgcgcgc gctctttgtg 480
 32 ctggtggtctt ccagctgcgc ctaccagggt tgccggccgc cgctgtacca gctcggcgct 540
 33 gccactcagg cccggggccc gccacacgtc agtggacccc gaaggcggt gggatgcgaa 600
 34 cgggccttgg accatagcgt caggaggccc ggggtccccc tgggcctgtcc agccccgggt 660
 35 gcgaggaggc gcgggggcag tgccagccg agtctgcgt tgcccaagag gcccaggcg 720
 36 ggcgcgtccc ctgagccggc gcggacgccc gttgggcagg gtcctgggc ccaccgggc 780
 37 aggacgcgtg gaccgagtga cctgtgtttc tgtgtgtgt cacctgcac accgcggaa 840
 38 gaagccacct ctttggaggg tgctgcgtctt ggcacgcgc actcccaccc atccgtggc 900
 39 cggcagcacc acgcggggccc cccatccaca tcgcggccac cacgtccctg ggacacgcct 960
 40 tgtccccccgg tgtacgcga gaccaagcac ttccctctact cctcaggcga caaggagcag 1020
 41 ctgcggccctt cttctctact cagctctctg aggcccagcc tgactggcgc tcggaggctc 1080
 42 gtggagacca tctttctggg ttccaggccc tggatgccag ggactccccg caggttgc 1140
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 50 cgcaggagcc caggggttgg ctgtgttccg gccgcagagc accgtctgcg tgaggagatc 1620
 51 ctggccaagt tcctgcactg gctgatgagt gtgtacgtcg tcgagctgtc caggctttc 1680
 52 ttttatgtca cggagaccac gtttcaaaaag aacaggtctt ttttctaccg gaagagtgtc 1740

P.6

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/502,498A

DATE: 01/30/2003

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Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\01292003\I502498A.raw

53 tggagcaagt tgcaaagcat tggaatcaga cagcacttga agagggtgca gctgcggag 1800
 54 ctgtcggaag cagaggtcag gcagcatcg gaagccaggc ccgccctgct gacgtccaga 1860
 55 ctccgcttca tccccaaagcc tgacgggctg cggccgattt tgaacatgga ctacgtcgtg 1920
 56 ggagccagaa cggtcccgag agaaaagagg gccgagcgtc tcacctcgag ggtgaaggca 1980
 57 ctgttcagcg tgctcaacta cgagcgggccc cggcccccgg gcctcctggg cgcctctgtg 2040
 58 ctgggcctgg acgatatcca cagggcctgg cgcacccctcg tgctgcgtgt gcgggcccag 2100
 59 gaccgcgcgc ctgagctgta ctttgtcaag gtggatgtga cgggcgcgta cgacaccatc 2160
 60 ccccaggaca ggctcacgga ggtcatcgcc agcatcatca aaccccagaa cacgtactgc 2220
 61 gtgcgtcggt atgcccgtgtt ccagaaggcc gcccatagggc acgtccgcaaa ggccttcaag 2280
 62 agccacgtct ctaccttgc acgactccag cgttacatgc gacagttcgt ggctcacctg 2340
 63 caggagacca gcccgtgag ggatgccgtc gtcatcgagc agagctccctc cctgaatgag 2400
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 67 gggctgtcc tggcttgggtt ggatgattt ttgttgggtt cacctcacctt caccacgcg 2640
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 69 cggaaagacag tggtaactt ccctgttagaa gacgaggccc tgggtggcac ggctttgtt 2760
 70 cagatgccgg cccacccgcatttccctgg tgcggcctgc tgctggatataccgcg 2820
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 74 atctacaaga tcctcctgtc gcaggcgtac aggttccacg catgtgtgtc gcagctccca 3060
 75 tttcatcagc aagtttggaa gaaccccaca tttttccctgc gcgtcatctc tgacacggcc 3120
 76 tcctctgtct actccatctt gaaagccaag aacgcaggga tggctcgctggg ggccaaggcc 3180
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 87 catccaggtt gggccatgtt gaaaggccctt gggagctctt ggaattttggaa gtgacccaaag 3840
 88 gtgtgcctgtt tacacaggcc agggccctgtt acctggatgtt gggccctgtt gggtaaaattt 3900
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 90 aaaa 3964

92 <210> SEQ ID NO: 2
 93 <211> LENGTH: 1132
 94 <212> TYPE: PRT
 95 <213> ORGANISM: Homo sapiens
 97 <400> SEQUENCE: 2

98 Met Pro Arg Ala Pro Arg Cys Arg Ala Val Arg Ser Leu Leu Arg Ser
 99 1 5 10 15
 101 His Tyr Arg Glu Val Leu Pro Leu Ala Thr Phe Val Arg Arg Leu Gly
 102 20 25 30
 104 Pro Gln Gly Trp Arg Leu Val Gln Arg Gly Asp Pro Ala Ala Phe Arg
 105 35 40 45

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/502,498A

DATE: 01/30/2003

TIME: 12:42:55

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\01292003\I502498A.raw

107 Ala Leu Val Ala Gln Cys Leu Val Cys Val Pro Trp Asp Ala Arg Pro
 108 50 55 60
 110 Pro Pro Ala Ala Pro Ser Phe Arg Gln Val Ser Cys Leu Lys Glu Leu
 111 65 70 75 80
 113 Val Ala Arg Val Leu Gln Arg Leu Cys Glu Arg Gly Ala Lys Asn Val
 114 85 90 95
 116 Leu Ala Phe Gly Phe Ala Leu Leu Asp Gly Ala Arg Gly Gly Pro Pro
 117 100 105 110
 119 Glu Ala Phe Thr Thr Ser Val Arg Ser Tyr Leu Pro Asn Thr Val Thr
 120 115 120 125
 122 Asp Ala Leu Arg Gly Ser Gly Ala Trp Gly Leu Leu Leu Arg Arg Val
 123 130 135 140
 125 Gly Asp Asp Val Leu Val His Leu Leu Ala Arg Cys Ala Leu Phe Val
 126 145 150 155 160
 128 Leu Val Ala Pro Ser Cys Ala Tyr Gln Val Cys Gly Pro Pro Leu Tyr
 129 165 170 175
 131 Gln Leu Gly Ala Ala Thr Gln Ala Arg Pro Pro Pro His Ala Ser Gly
 132 180 185 190
 134 Pro Arg Arg Arg Leu Gly Cys Glu Arg Ala Trp Asn His Ser Val Arg
 135 195 200 205
 137 Glu Ala Gly Val Pro Leu Gly Leu Pro Ala Pro Gly Ala Arg Arg Arg
 138 210 215 220
 140 Gly Gly Ser Ala Ser Arg Ser Leu Pro Leu Pro Lys Arg Pro Arg Arg
 141 225 230 235 240
 143 Gly Ala Ala Pro Glu Pro Glu Arg Thr Pro Val Gly Gln Gly Ser Trp
 144 245 250 255
 146 Ala His Pro Gly Arg Thr Arg Gly Pro Ser Asp Arg Gly Phe Cys Val
 147 260 265 270
 149 Val Ser Pro Ala Arg Pro Ala Glu Ala Thr Ser Leu Glu Gly Ala
 150 275 280 285
 152 Leu Ser Gly Thr Arg His Ser His Pro Ser Val Gly Arg Gln His His
 153 290 295 300
 155 Ala Gly Pro Pro Ser Thr Ser Arg Pro Pro Arg Pro Trp Asp Thr Pro
 156 305 310 315 320
 158 Cys Pro Pro Val Tyr Ala Glu Thr Lys His Phe Leu Tyr Ser Ser Gly
 159 325 330 335
 161 Asp Lys Glu Gln Leu Arg Pro Ser Phe Leu Leu Ser Ser Leu Arg Pro
 162 340 345 350
 164 Ser Leu Thr Gly Ala Arg Arg Leu Val Glu Thr Ile Phe Leu Gly Ser
 165 355 360 365
 167 Arg Pro Trp Met Pro Gly Thr Pro Arg Arg Leu Pro Arg Leu Pro Gln
 168 370 375 380
 170 Arg Tyr Trp Gln Met Arg Pro Leu Phe Leu Glu Leu Leu Gly Asn His
 171 385 390 395 400
 173 Ala Gln Cys Pro Tyr Gly Val Leu Leu Lys Thr His Cys Pro Leu Arg
 174 405 410 415
 176 Ala Ala Val Thr Pro Ala Ala Gly Val Cys Ala Arg Glu Lys Pro Gln
 177 420 425 430
 179 Gly Ser Val Ala Ala Pro Glu Glu Asp Thr Asp Pro Arg Arg Leu

RAW SEQUENCE LISTING

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Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\01292003\I502498A.raw

180	435	440	445
182	Val Gln Leu Leu Arg Gln His Ser Ser Pro Trp Gln Val Tyr Gly Phe		
183	450	455	460
185	Val Arg Ala Cys Leu Arg Arg Leu Val Pro Pro Gly Leu Trp Gly Ser		
186	465	470	475
188	Arg His Asn Glu Arg Arg Phe Leu Arg Asn Thr Lys Lys Phe Ile Ser		480
189	485	490	495
191	Leu Gly Lys His Ala Lys Leu Ser Leu Gln Glu Leu Thr Trp Lys Met		
192	500	505	510
194	Ser Val Arg Asp Cys Ala Trp Leu Arg Arg Ser Pro Gly Val Gly Cys		
195	515	520	525
197	Val Pro Ala Ala Glu His Arg Leu Arg Glu Glu Ile Leu Ala Lys Phe		
198	530	535	540
200	Leu His Trp Leu Met Ser Val Tyr Val Val Glu Leu Leu Arg Ser Phe		
201	545	550	555
203	Phe Tyr Val Thr Glu Thr Phe Gln Lys Asn Arg Leu Phe Phe Tyr		560
204	565	570	575
206	Arg Lys Ser Val Trp Ser Lys Leu Gln Ser Ile Gly Ile Arg Gln His		
207	580	585	590
209	Leu Lys Arg Val Gln Leu Arg Glu Leu Ser Glu Ala Glu Val Arg Gln		
210	595	600	605
212	His Arg Glu Ala Arg Pro Ala Leu Leu Thr Ser Arg Leu Arg Phe Ile		
213	610	615	620
215	Pro Lys Pro Asp Gly Leu Arg Pro Ile Val Asn Met Asp Tyr Val Val		
216	625	630	635
218	Gly Ala Arg Thr Phe Arg Arg Glu Lys Arg Ala Glu Arg Leu Thr Ser		640
219	645	650	655
221	Arg Val Lys Ala Leu Phe Ser Val Leu Asn Tyr Glu Arg Ala Arg Arg		
222	660	665	670
224	Pro Gly Leu Leu Gly Ala Ser Val Leu Gly Leu Asp Asp Ile His Arg		
225	675	680	685
227	Ala Trp Arg Thr Phe Val Leu Arg Val Arg Ala Gln Asp Pro Pro Pro		
228	690	695	700
230	Glu Leu Tyr Phe Val Lys Val Asp Val Thr Gly Ala Tyr Asp Thr Ile		
231	705	710	715
233	720		
234	Pro Gln Asp Arg Leu Thr Glu Val Ile Ala Ser Ile Ile Lys Pro Gln		
236	725	730	735
237	Asn Thr Tyr Cys Val Arg Arg Tyr Ala Val Val Gln Lys Ala Ala His		
239	740	745	750
240	Gly His Val Arg Lys Ala Phe Lys Ser His Val Ser Thr Leu Thr Asp		
242	755	760	765
243	Leu Gln Pro Tyr Met Arg Gln Phe Val Ala His Leu Gln Glu Thr Ser		
245	770	775	780
246	Pro Leu Arg Asp Ala Val Val Ile Glu Gln Ser Ser Ser Leu Asn Glu		
248	785	790	795
249	Ala Ser Ser Gly Leu Phe Asp Val Phe Leu Arg Phe Met Cys His His		800
251	805	810	815
252	Ala Val Arg Ile Arg Gly Lys Ser Tyr Val Gln Cys Gln Gly Ile Pro		
	820	825	830

RAW SEQUENCE LISTING

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Input Set : A:\PTO.AMC.txt
 Output Set: N:\CRF4\01292003\I502498A.raw

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254 Gln Gly Ser Ile Leu Ser Thr Leu Leu Cys Ser Leu Cys Tyr Gly Asp
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257 Met Glu Asn Lys Leu Phe Ala Gly Ile Arg Arg Asp Gly Leu Leu Leu
258     850           855           860
260 Arg Leu Val Asp Asp Phe Leu Leu Val Thr Pro His Leu Thr His Ala
261 865           870           875           880
263 Lys Thr Phe Leu Arg Thr Leu Val Arg Gly Val Pro Glu Tyr Gly Cys
264     885           890           895
266 Val Val Asn Leu Arg Lys Thr Val Val Asn Phe Pro Val Glu Asp Glu
267     900           905           910
269 Ala Leu Gly Gly Thr Ala Phe Val Gln Met Pro Ala His Gly Leu Phe
270     915           920           925
272 Pro Trp Cys Gly Leu Leu Asp Thr Arg Thr Leu Glu Val Gln Ser
273     930           935           940
275 Asp Tyr Ser Ser Tyr Ala Arg Thr Ser Ile Arg Ala Ser Leu Thr Phe
276 945           950           955           960
278 Asn Arg Gly Phe Lys Ala Gly Arg Asn Met Arg Arg Lys Leu Phe Gly
279     965           970           975
281 Val Leu Arg Leu Lys Cys His Ser Leu Phe Leu Asp Leu Gln Val Asn
282     980           985           990
284 Ser Leu Gln Thr Val Cys Thr Asn Ile Tyr Lys Ile Leu Leu Leu Gln
285     995           1000          1005
287 Ala Tyr Arg Phe His Ala Cys Val Leu Gln Leu Pro Phe His Gln Gln
288 1010          1015          1020
290 Val Trp Lys Asn Pro Thr Phe Phe Leu Arg Val Ile Ser Asp Thr Ala
291 1025          1030          1035          1040
293 Ser Leu Cys Tyr Ser Ile Leu Lys Ala Lys Asn Ala Gly Met Ser Leu
294     1045          1050          1055
296 Gly Ala Lys Gly Ala Ala Gly Pro Leu Pro Ser Glu Ala Val Gln Trp
297     1060          1065          1070
299 Leu Cys His Gln Ala Phe Leu Leu Lys Leu Thr Arg His Arg Val Thr
300     1075          1080          1085
302 Tyr Val Pro Leu Leu Gly Ser Leu Arg Thr Ala Gln Thr Gln Leu Ser
303     1090          1095          1100
305 Arg Lys Leu Pro Gly Thr Thr Leu Thr Ala Leu Glu Ala Ala Ala Asn
306 1105          1110          1115          1120
308 Pro Ala Leu Pro Ser Asp Phe Lys Thr Ile Leu Asp
309     1125          1130
312 <210> SEQ ID NO: 3
313 <211> LENGTH: 1031
314 <212> TYPE: PRT
315 <213> ORGANISM: Euplotes aediculatus
317 <400> SEQUENCE: 3
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319 1           5           10           15
321 Ala Leu Lys Thr Cys Glu Glu Ile Lys Glu Ala Lys Thr Leu Tyr Ser
322     20           25           30
324 Trp Ile Gln Lys Val Ile Arg Cys Arg Asn Gln Ser Gln Ser His Tyr
325     35           40           45

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RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/09/502,498A

DATE: 01/30/2003
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Input Set : A:\PTO.AMC.txt
Output Set: N:\CRF4\01292003\I502498A.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:15; N Pos. 1,2,3,4,5,6,7
Seq#:34; N Pos. 1767,1768,1769
Seq#:51; N Pos. 1871,1872,1873
Seq#:91; Xaa Pos. 2,3,4,5
Seq#:93; Xaa Pos. 2,3,4,5,7,8
Seq#:95; N Pos. 1,2,3,5,9,10,11,12,13,14